the journal of steroid biochemistry

editors-in-chief

J. R. PASQUALINI and R. SCHOLLER

Volume Contents,
Subject and Author Index (January–May 1990)

Volume 35
1990

Pergamon Press

Oxford New York Beijing Frankfurt São Paulo Sydney Tokyo Toronto

EDITORS-IN-CHIEF

J. R. PASQUALINI and R. SCHOLLER,
Foundation for Hormone Research, 26 Boulevard Brune, 75014 Paris, France

ASSOCIATE EDITORS

Honorary Associate Editor: A. E. KELLIE, Beaconsfield, England

H. ADLERCREUTZ, Helsinki, Finland
M. BEATO, Marburg/Lahn, F.R.G.
J. CRABBÉ, Brussels, Belgium
E. GURPIDE, New York, U.S.A.
J-Å. GUSTAFSSON, Huddinge, Sweden
E. V. JENSEN, Chicago, Ill., U.S.A.
R. J. B. KING, Guildford, England
M. E. LIPPMAN, Washington, D.C., U.S.A.
L. MARTINI, Milan, Italy
A. MUNCK, Hanover, N.H., U.S.A.
B. W. O'MALLEY, Houston, Tex., U.S.A.
D. O. TOFT, Rochester, Minn., U.S.A.

CORRESPONDING EDITORS

A. AAKVAAG, Bergen, Norway
S. ANANCHENKO, Moscow, U.S.S.R.
F. AURICCHIO, Naples, Italy
P. L. BALLARD, San Francisco, U.S.A.
P. A. BELL, East Hanover, U.S.A.
E. W. BERGINK, Oss, The Netherlands
J. BLAQUIER, Buenos Aires, Argentina
R. BOUILLON, Leuven, Belgium
S. BOURGEOIS, San Diego, U.S.A.
A. BRODIE, Baltimore, U.S.A.
K. J. CATT, Bethesda, U.S.A.
L. CEDARD, Paris, France
J. A. CIDLOWSKI, Chapel Hill, U.S.A.
J. H. CLARK, Houston, U.S.A.
G. DAXENBICHLER, Innsbruck, Austria
L. DEHENNIN, Fresnes, France
E. R. DESOMBRE, Chicago, U.S.A.
B. N. DÍAZ-CHICO, Las Palmas
R. B. DICKSON, Washington, U.S.A.
M. L. DUFAU, Bethesda, U.S.A.
H. A. ERIKSSON, Stockholm, Sweden
K. FOTHERBY, London, England
J. W. FUNDER, Melbourne, Australia
G. GREENE, Chicago, U.S.A.
K. GRIFFITHS, Cardiff, Wales
B. GRONER, Basel, Switzerland
K. B. HORWITZ, Denver, U.S.A.
I. HUHTANIEMI, Turku, Finland
D. R. IDLER, Newfoundland, Canada
V. H. T. JAMES, London, England
V. C. JORDAN, Madison, U.S.A.
J. KATO, Yamanashi-ken, Japan
B. S. KATZENELLENBOGEN, Urbana, U.S.A.
A. M. KAYE, Rehovot, Israel
F. LABRIE, Quebec, Canada
C. P. LANTOS, Buenos Aires, Argentina
S. LIAO, Chicago, U.S.A.
P. C. MACDONALD, Dallas, U.S.A.
B. S. MCEWEN, New York, U.S.A.
W. L. MCGUIRE, San Antonio, U.S.A.
E. MILGROM, Le Kremlin-Bicêtre, France
W. R. MILLER, Edinburgh, Scotland
J. MÜLLER, Zurich, Switzerland
B. E. P. MURPHY, Montreal, Canada
M. NEVES-E-CASTRO, Lisbon, Portugal
M. I. NEW, New York, U.S.A.
A. W. NORMAN, Riverside, U.S.A.
H. OKADA, Kyoto, Japan
M. J. PARKER, London, England
G. PÉREZ-PALACIOS, Mexico City, Mexico
W. B. PRATT, Ann Arbor, U.S.A.
J. P. RAYNAUD, Paris, France
H. ROCHEFORT, Montpellier, France
G. ROUSSEAU, Brussels, Belgium
W. T. SCHRADER, Houston, U.S.A.
M. SERIO, Florence, Italy
E. R. SIMPSON, Dallas, U.S.A.
J. SJÖVALL, Stockholm, Sweden
A. SPÄT, Budapest, Hungary
L. STÁRKA, Prague, Czechoslovakia
R. L. SUTHERLAND, Darlinghurst, Australia
G. E. SWANECK, Miami, U.S.A.
J. R. TATA, London, England
W. TAYLOR, Tynemouth, England
P. TUOHIMAA, Tampere, Finland
S. ULICK, New York, U.S.A.
G. VERHOEVEN, Leuven, Belgium
A. VERMEULEN, Ghent, Belgium
R. VIHKO, Oulu, Finland
C. A. VILLEE, Boston, U.S.A.
A. E. WAKELING, Macclesfield, England
C. R. WIRA, Hanover, U.S.A.

Publishing Office
Journals Production Unit, Pergamon Press plc, Hennock Road, Marsh Barton, Exeter, Devon EX2 8NE, England
(*Tel.* Exeter (0392) 51558; *Fax* 425370; *Telex* 42749)

Subscription and Advertising Offices
North America: Pergamon Press Inc., Maxwell House, Fairview Park, Elmsford, NY 10523, U.S.A.
Rest of the World: Pergamon Press plc, Headington Hill Hall, Oxford OX3 0BW, England (*Tel.* Oxford (0865) 64881)

Subscription per annum (1990), *including postage and insurance. Annual institutional subscription rate* (1990) DM 1910.00; *2-year institutional rate* (1990/91) DM 3629.00; *personal subscription rate for those whose library subscribes at the regular rate* (1990) DM 195. *Payments to be made in advance. Prices are subject to amendment without notice.*

Back Issues: Back issues of all previously published volumes, in both hard copy and in microform, are available direct from Pergamon Press offices.

Publication Frequency: 18 issues per annum

Copyright © 1990 Pergamon Press plc

It is a condition of publication that manuscripts submitted to this journal have not been published and will not be simultaneously submitted or published elsewhere. By submitting a manuscript, the authors agree that the copyright for their article is transferred to the publisher if and when the article is accepted for publication. However, assignment of copyright is not required from authors who work for organizations which do not permit such assignment. The copyright covers the exclusive rights to reproduce and distribute the article, including reprints, photographic reproductions, microform or any other reproductions of similar nature and translations. No part of this publication may be reproduced, stored in a retrieval system or transmitted in any form or by any means, electronic, electrostatic, magnetic tape, mechanical, photocopying, recording or otherwise, without permission in writing from the copyright holder.

Photocopying information for users in the U.S.A.
The Item-fee Code for this publication indicates that authorization to photocopy items for internal or personal use is granted by the copyright holder for libraries and other users registered with the Copyright Clearance Center (CCC) Transactional Reporting Service provided the stated fee for copying, beyond that permitted by Section 107 or 108 of the U.S. Copyright Law, is paid. The appropriate remittance of $3.00 per copy per article is paid directly to the Copyright Clearance Center Inc., 27 Congress Street, Salem, MA 01970, U.S.A.

Permission for other use
The copyright owner's consent does not extend to copying for general distribution, for promotion, for creating new works or for resale. Specific written permission must be obtained from the publisher for such copying. *The Item-fee Code for this publication is:* 0022-4731/90 $3.00 + 0.00

⊗™ The paper used in this publication meets the minimum requirements of American National Standard for Information Sciences—Permanence of Paper for Printed Library Materials, ANSI Z39.48-1984.

LIST OF CONTENTS

JANUARY

D. V. Harbour, P. Chambon and E. Brad Thompson 1 Steroid mediated lysis of lymphoblasts requires the DNA binding region of the steroid hormone receptor

Claudia Grillo, Santiago Vallee, Bruce S. McEwen and Alejandro F. De Nicola 11 Properties and distribution of binding sites for the mineralocorticoid receptor antagonist [^{3}H]ZK 91587 in brain

Olaf Ortmann, Rita Sturm, Rudolf Knuppen and Günter Emons 17 Weak estrogenic activity of Phenol Red in the pituitary gonadotroph: re-evaluation of estrogen and antiestrogen effects

Yvette M. Huet-Hudson and S. K. Dey 23 Differential effects of ovarian steroids and triphenylethylene compounds on macromolecular uptake and thymidine incorporation in the mouse uterus

María V. Lobo, Rubén R. Mendoza and Elisa T. Marusic 29 SN-1,2 dioctanoylglycerol mimics the effects of angiotensin II on aldosterone production and potassium permeability in isolated bovine glomerulosa cells

Timothy J. A. Key, Malcolm C. Pike, John W. Moore, Dennis Y. Wang and Barbara Morgan 35 The relationship of free fatty acids with the binding of oestradiol to SHBG and to albumin in women

Chandan Chakraborty, Yvette M. Huet-Hudson and Sudhansu K. Dey 39 Catecholoestrogen synthesis and metabolism in the rabbit uterus during the periimplantation period

Eric C. LaCasse, Gillian M. Howell and Yvonne A. Lefebvre 47 Microsomal dexamethasone binding sites identified by affinity labelling

Judith A. Clements, Bronwyn A. Matheson, Raymond J. MacDonald and John W. Funder 55 Oestrogen administration and the expression of the kallikrein gene family in the rat submandibular gland

Lena Nyberg, Lyuben N. Marekov, Ilona Jones, Gunilla Lundquist and Hans Jörnvall 61 Characterization of the murine corticosteroid binding globulin: variations between mammalian forms

Leon Milewich, Stephen J. Fortunato, Michael Barris, Mark C. Maberry, Larry C. Gilstrap and Paul C. MacDonald 67 17β-hydroxysteroid oxidoreductase activity in human maternal and umbilical cord sera

Shuji Inoue, Isao Morimoto, Shunichi Yamashita, Motomori Izumi and Shigenobu Nagataki 77 Androgen metabolism in rat L6 myoblast cells; high formation of 5α-androstane-3α,17β-diol from testosterone

E. Vanluchene, A. Hinting, M. Dhont, R. Serreyn and D. Vandekerckhove 83 Steroid determinations in human ovarian follicular fluid using capillary gas chromatography

C. Longcope and C. C. Johnston, Jr 91 Androgen and estrogen dynamics: stability over a two year interval in peri-menopausal women

A. Poletti, F. Celotti, R. C. Melcangi, M. Ballabio and L. Martini 97 Kinetic properties of the 5α-reductase of testosterone in the purified myelin, in the subcortical white matter and in the cerebral cortex of the male rat brain

W. R. Kelce, V. K. Ganjam and P. K. Rudeen 103 Effects of fetal alcohol exposure on brain 5α-reductase/aromatase activity

Paul G. M. Hesselink, Antonius Kerkenaar and Bernard Witholt 107 Inhibition of microbial cholesterol oxidases by dimethylmorpholines

Kelvin E. Smith, Shahid Latif and David N. Kirk 115 Microbial transformations of steroids—VI. Transformation of testosterone and androstenedione by *Botryosphaerica obtusa*

Bernard Martin and Pierre Silberzahn 121 Concentration decrease of corticosteroid binding globulin (CBG) in plasma of the mare throughout pregnancy

M. Härkönen, H. Näveri, K. Kuoppasalmi and I. Huhtaniemi 127 Pituitary and gonadal function during physical exercise in the male rat

Patrick Vexiau, Jean Fiet, Philippe Boudou, Jean-Marie Villette, Gilles Feutren, Noah Hardy, Rene Julien, Claude Dreux, Jean-Francois Bach and Gerard Cathelineau 133 Increase in plasma 5α-androstane-3α,17β-diol glucuronide as a marker of peripheral androgen action in hirsutism: a side-effect induced by cyclosporine A

Yusuf J. Abul-Hajj 139 Aromatase inhibition by 4-thiosubstituted-4-androstene-3,17-dione derivatives

R. C. Melcangi. F. Celotti, M. Ballabio, A. Poletti and L. Martini 145 Testosterone metabolism in peripheral nerves: presence of the 5α-reductase-3α-hydroxysteroid-dehydrogenase enzymatic system in the sciatic nerve of adult and aged rats

Short Communications

Vipin K. Agarwal 149 A new procedure for the isomerization of vitamin D and its metabolites

Ian R. Senciall, R. Roberts and S. Rahal 151 A novel chromatographic resolution of 21-hydroxysteroid metabolites of progesterone

Jenny Pokorná and Alexander Kasal 155 Progesterone side-chain degradation beside hydroxylation with *Rhizopus nigricans* depends on the presence of nutrients

Forthcoming Papers I

Announcement II

FEBRUARY

General Review

A. H. W. M. Schuurs and H. A. M. Verheul 157 Effects of gender and sex steroids on the immune response

P. M. Sekhar Reddy and P. R. K. Reddy 173 Differential regulation of DNA methylation in rat testis and its regulation by gonadotropic hormones

Kevin G. Pinney, Kathryn E. Carlson and John A. Katzenellenbogen 179 [^{3}H]DU41165: a high affinity ligand and novel photoaffinity labeling reagent for the progesterone receptor

M. E. Hayes, M. Davies, D. Bayley, J. A. Liu Yin and E. B. Mawer 191 Synthesis of 1,25-dihydroxyvitamin D_3 by spleen cells isolated from two patients with myelofibrosis and a normal subject

F. K. Habib, S. Q. Maddy and K. J. Gelly 195 Characterisation of receptors for 1,25-dihydroxyvitamin D_3 in the human testis

Günter Blaich, Martin Göttlicher, Peter Cikryt and Manfred Metzler 201 Effects of various inducers on diethylstilbestrol metabolism, drug-metabolizing enzyme activities and the aromatic hydrocarbon (Ah) receptor in male Syrian golden hamster liver

M. T. Benedetto, F. De Cicco, F. Rossiello, A. L. Nicosia, G. Lupi and S. Dell'Acqua 205 Oxytocin receptor in human fetal membranes at term and during labor

Chandan Chakraborty, Duane L. Davis and Sudhansu K. Dey 209 Estradiol-15α-hydroxylation: a new avenue of estrogen metabolism in peri-implantation pig blastocysts

Eduardo Palomino, Mary Jane Heeg, Jerome P. Horwitz and Sam C. Brooks 219 Binding, X-ray and NMR studies of the three A-ring isomers of natural estradiol

R. W. Hudson and D. Wherrett 231 Comparison of the nuclear 5α-reduction of testosterone and androstenedione in human prostatic carcinoma and benign prostatic hyperplasia

Richard Poulin, Donald Poirier, Catherine Thériault, Jean Couture, Alain Bélanger and Fernand Labrie	237	Wide spectrum of steroids serving as substrates for the formation of lipoidal derivatives in ZR-75-1 human breast cancer cells
S. Mäkelä, R. Santti, P. Martikainen, W. Nienstedt and J. Paranko	249	The influence of steroidal and nonsteroidal estrogens on the 5α-reduction of testosterone by the ventral prostate of the rat
B. Fernandez, J. L. Malde, A. Montero and D. Acuña	257	Relationship between adenohypophyseal and steroid hormones and variations in serum and urinary melatonin levels during the ovarian cycle, perimenopause and menopause in healthy women
H. H. D. Meyer, H. Sauerwein and B. M. Mutayoba	263	Immunoaffinity chromatography and a biotin-streptavidin amplified enzymeimmunoassay for sensitive and specific estimation of estradiol-17β
Yasuro Sugimoto, Yoshihiro Ohta, Tetsuya Morikawa, Tatsuya Yamashita, Masamitsu Yoshida and Bun-ichi Tamaoki	271	*In vitro* metabolism of testosterone on hepatic tissue of chicken (*Gallus domesticus*)
S. Madden, D. J. Back and M. L'E. Orme	281	Metabolism of the contraceptive steroid desogestrel by human liver *in vitro*
Paula Järvenpää	289	*In vitro* metabolism of catechol estrogens by human fecal microflora
K. Nahoul and M. Roger	293	Age-related decline of plasma bioavailable testosterone in adult men
Keiko Suzuki, Masakazu Takahashi, Hiroko Ishii-Ohba, Kiyomi Ikeda and Hiroshi Inano	301	Steroidogenesis in the testes and the adrenals of adult male rats after γ-irradiation *in utero* at late pregnancy
Pierre Barbey, Michel Herrou, André Nouvelot and Michel A. Drosdowsky	307	Partial purification of androgen binding protein from bull epididymis
Wilhelm Kuhnz, Michael Pfeffer and Gabriele Al-Yacoub	313	Protein binding of the contraceptive steroids gestodene, 3-keto-desogestrel and ethinylestradiol in human serum
Li Qi-Gui and M. Hümpel	319	Serum protein binding characteristics of cyproterone acetate, gestodene, levonorgestrel and norethisterone in rat, rabbit, dog, monkey and man
E. R. Barnea and S. Avigdor	327	Coordinated induction of estrogen hydroxylase and catechol-*O*-methyl transferase by xenobiotics in first trimester human placental explants
Rene A. Frenkel, Clive A. Slaughter, Kim Orth, Carolyn R. Moomaw, Shelley H. Hicks, Jeanne M. Snyder, Michael Bennett, Russell A. Prough, Robert S. Putnam and Leon Milewich	333	Peroxisome proliferation and induction of peroxisomal enzymes in mouse and rat liver by dehydroepiandrosterone feeding
Eduardo N. Cozza, María del Carmen Vila, Mildred Acevedo-Duncan, Celso E. Gomez-Sanchez and Robert V. Farese	343	ACTH increases *de novo* synthesis of diacylglycerol and translocates protein kinase C in primary cultures of calf adrenal glomerulosa cells
Book Reviews	353	
Forthcoming Papers	I	

MARCH

General Review **P. E. Lønning, M. Dowsett and T. J. Powles**	355	Postmenopausal estrogen synthesis and metabolism: alterations caused by aromatase inhibitors used for the treatment of breast cancer
Kenny M. Brantley and Sandra M. Whelly	367	Effect of estrogen on the elongation rate and number of RNA chains being synthesized in uterine nucleoli

SB 35/6—I

J. Khubieh, G. W. Aherne and J. Chakraborty	377	Radioimmunoassay of the anti-cancer agent 4-hydroxyandrostenedione in body fluids
Jesus Ventanas, Carmen Garcia, Clemente López-Bote, Antonio López and Justino Burgos	383	The binding of ^{3}H-labelled androgen-receptor complexes to hypothalamic chromatin of neonatal mice: effect of sex and androgenization
Lené J. Holland, Edward E. Diehl, R. Alex Colburn and Thomas J. Schmidt	391	Majority of RNA which co-purifies with unactivated rat hepatic glucocorticoid–receptor complexes is nonspecific and not receptor-associated
W. N. Scott, R. A. Hawkins, E. Killen and W. R. Miller	399	Levels of androgen conjugates and oestrone sulphate in patients with breast cysts
Lewis C. Krey and Marilyn Y. McGinnis	403	Time-courses of the appearance/disappearance of nuclear androgen + receptor complexes in the brain and adenohypophysis following testosterone administration/withdrawal to castrated male rats: relationships with gonadotropin secretion
Charles Eil and Bruce C. Nisula	409	The binding properties of pyrethroids to human skin fibroblast androgen receptors and to sex hormone binding globulin
E. V. YoungLai, N. Thompson and W. Foster	415	Effects of steroid implants on the prepubertal increase in circulating gonadotropins and sexual receptivity in the female rabbit
A. P. M. Wilson, P. J. Weatherill, R. I. Nicholson, P. Davies and A. E. Wakeling	421	A comparative study of the interaction of oestradiol and the steroidal pure antioestrogen, ICI 164,384, with the molybdate-stabilized oestrogen receptor
Brian Gemzik, Michael R. Halvorson and Andrew Parkinson	429	Pronounced and differential effects of ionic strength and pH on testosterone oxidation by membrane-bound and purified forms of rat liver microsomal cytochrome *P*-450
Catherine Courion-Guichardaz, Abdallah Fanidi, Jean-François Pageaux and Christian Laugier	441	Modulation of quail oviduct adenylate cyclase activity by estradiol and progesterone
Linda S. Jefferies and P. Elaine Roberts	449	A new method of detecting hormone-binding proteins electroblotted onto glass fiber filter: juvenile hormone-binding proteins from grasshopper hemolymph
O. V. Smirnova, T. G. Vishnyakova, V. B. Rozen, A. A. Shnyra, A. V. Bocharov and V. G. Spirov	457	*In vivo* and *in vitro* estimations of the direct effect of estrogen on rat hepatocytes tested by the changes in the unusual estrogen-binding protein content
Michael Murray and Ishita Mehta	465	Structure–activity relationships in the *in vitro* modulation of rat hepatic microsomal androst-4-ene-3,17-dione hydroxylase activities by derivatives of 5α- and 5β-androstane
Gisela H. Degen	473	Interaction of phytoestrogens and other environmental estrogens with prostaglandin synthase *in vitro*
Neal B. West, Kay S. Carlisle and Robert M. Brenner	481	Progesterone treatment suppresses estrogen receptor in the sex skin of *Macaca nemestrina*
André Lanthier, John A. DiBattista and Vasant V. Patwardhan	487	Pregnenolone binding sites in the rat olfactory bulb
John P. Carbone, Robert C. Baldridge, Thomas R. Koszalka, Alfred M. Bongiovanni and Robert L. Brent	495	Characterization of cytosolic glucocorticoid receptor of fetal rat epiphyseal chondrocytes
J.-P. Weniger and A. Zeis	507	Action of LH, FSH and $(Bu)_2$ cAMP on the conversion of [^{3}H]19-hydroxy-androstenedione into oestrogens by foetal and infantile rat ovaries in organ culture
Eduardo N. Cozza, Mark F. Foecking and Celso E. Gómez-Sánchez	511	The binding of cortisol to adrenal mitochondria
Book Reviews	515	

Forthcoming Papers I

Announcement II

APRIL

General Review

Oleg A. Strel'chyonok and George V. Avvakumov 519 Specific steroid-binding glycoproteins of human blood plasma: novel data on their structure and function

Leszek Markiewicz and Erlio Gurpide 535 *In vitro* evaluation of estrogenic, estrogen antagonistic and progestagenic effects of a steroidal drug (Org OD-14) and its metabolites on human endometrium

Thomas Ratajczak, Josephine Hlaing, Martine J. Brockway and Roland Hähnel 543 Isolation of untransformed bovine estrogen receptor without molybdate stabilization

Joachim G. Liehr, Deodutta Roy, Aysegul Ari-Ulubelen, Quang D. Bui, Judith Weisz and Henry W. Strobel 555 Effect of chronic estrogen treatment of Syrian hamsters on microsomal enzymes mediating formation of catecholestrogens and their redox cycling: implications for carcinogenesis

Y. Miyashita, T. Hirose, H. Kouhara, S. Kishimoto, K. Matsumoto and B. Sato 561 Identification of unoccupied but transformed nuclear estrogen receptor in cultured mouse Leydig cell

R. B. Franklin, K. Qian and L. C. Costello 569 Regulation of aspartate aminotransferase messenger ribonucleic acid level by testosterone

H. Vanderstichele, W. Eechaute and E. Lacroix 575 Regulation of the pituitary 5α-reductase activity by gonadotropin releasing hormone and testosterone in the adult male rat

Marc Feuilloley, Monica B. Stolz, Catherine Delarue, Jean-Luc Fauchère and Hubert Vaudry 583 Structure–activity relationships of monomeric and dimeric synthetic ACTH fragments in perifused frog adrenal slices

Miyuki Furuyama, Shinri Koshika, Hiroyuki Hayashi, Hiroshi Ejiri and Yoshiyuki Nakayama 593 Androgenic actions of 5α-androstane-3α,17β-diol in rat submandibular gland

Christopher Longcope and Lisa Hoberg 601 Estrogen metabolism as measured in blood and urine in female rhesus monkeys

J.-P. Weniger, J. Chouraqui and A. Zeis 607 Estradiol secretion by the ovary of 19-day-old hypophysectomized and sham-operated chick embryos

Miyuki Furuyama, Shinri Koshika, Akihiko Amaki and Masahiko Hosaka 611 3α-Hydroxysteroid dehydrogenase in the cytosol of rat submandibular gland

Steven Eiger, Karen T. Mills and Howard A. Bern 617 Steroid binding alterations in tissue compartments of the vagina of control and neonatally diethylstilbestrol-treated adult mice

Short Communications

Susan J. Quirk, Jacquelyne Slattery and John W. Funder 623 11β-Hydroxysteroid dehydrogenase activity in the mammary gland

Marija Žakelj-Mavrič, Ana Plemenitaš, Radovan Komel and Igor Belič 627 11β-Hydroxylation of steroids by *Cochliobolus lunatus*

Book Reviews 631

Forthcoming Papers I

Announcement II

MAY

L. X. Tiefenauer and R. Y. Andres	633	Biotinyl-estradiol derivatives in enzyme immunoassays: structural requirements for optimal antibody binding
Elizabeth K. Symes, W. F. Coulson, R. Das and J. H. Scurr	641	The synthesis of E-17α-[^{131}I]iodo-vinyl oestradiol and evaluation of its use as a radiotracer for oestrogen receptor positive breast tumours
Placido B. Grino, James E. Griffin and Jean D. Wilson	647	Androgen resistance due to decreased amounts of androgen receptor: a reinvestigation
Noriyuki Hara, Tadashi Eguchi, Nobuo Ikekawa, Seiichi Ishizuka and Jun-ichi Sato	655	Synthesis and biological activity of (22*E*,25*R*)- and (22*E*,25*S*)-22-dehydro-1α,25-dihydroxy-26-methylvitamin D_3
J. D. Croxtall, M. G. Elder and J. O. White	665	Hormonal control of proliferation in the Ishikawa endometrial adenocarcinoma cell line
Mónica Ferrini, Ana María Magariños and Alejandro F. De Nicola	671	Oestrogens down-regulate type I but not type II adrenal corticoid receptors in rat anterior pituitary
B. Svenstrup, N. Brünner, P. Dombernowsky, I. Nøhr, S. Micic, P. Bennett and M. Spang-Thomsen	679	Comparison of the effect of cortisol of aromatase activity and androgen metabolism in two human fibroblast cell lines derived from the same individual
P. Stanchev, H. Rodriguez-Martinez, L.-E. Edqvist and H. Eriksson	689	Characterization of uterine sex steroid receptors in the pig and their variation during the oestrous cycle
Sohaib A. Khan and Bruce C. Moulton	701	Regulation of 3-hydroxyl-3-methylglutaryl-coenzyme A reductase activity in rat uterine tissues
Peter H. Jellinck and H. Leon Bradlow	705	Peroxidase-catalyzed displacement of tritium from regiospecifically labeled estradiol and 2-hydroxyestradiol
Hiroshi Inano, Hiroko Ishii-ohba, Keiko Suzuki and Kiyomi Ikeda	711	Reasons for reduced activities of 17α-hydroxylase and C_{17}–C_{20} lyase in spite of increased contents of cytochrome *P*-450 in mature rat testis fetally irradiated with ^{60}Co
E. P. Murono and A. L. Washburn	715	Regulation of 5α-reductase activity in cultured immature Leydig cells by human chorionic gonadotropin
M. Laine and A. Ojanotko-Harri	723	Progesterone metabolism by major salivary glands of rat—I. Submandibular and sublingual glands
P. J. O'Shaughnessy and J. W. Sheffield	729	Effect of testosterone on testicular steroidogenesis in the hypogonadal (*hpg*) mouse
C. B. Whorwood, J. Montalto, S. R. Sandars and J. F. Connelly	735	Urinary 5-ene-steroid excretion in non-classical congenital adrenal hyperplasia due to 3β-hydroxysteroid dehydrogenase deficiency (NC-3BHSD)
Minireview		
Yu-hua Ji, Christiane Moog, Gaby Schmitt and Bang Luu	741	Polyoxygenated seterols and triterpenes: chemical structures and biological activities
Short Communications		
Xiao-dong Qian and Yusuf J. Abul-Hajj	745	Synthesis and biological activity of 4-methylestradiol
Tamara Hudnik-Plevnik and Bronja Cresnar	749	Factors affecting the induction of 11α-hydroxylase of progesterone in the filamentous fungus *Rhizopus nigricans*
Book Reviews	753	
Forthcoming Papers	I	